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ABSTRACT

This literature review examines the teaching techniques and school environments that have been linked with high scores on standardized tests. It describes the strategies that might be used to achieve one particular educational goal, while making teachers aware that trade-offs are required when they choose to emphasize one particular goal. The introduction discusses the question of educational goals in general and provides a background to effective schools research. The second section reviews research on the characteristics of the effective school: expectations, leadership, school environment, academic emphasis, school goals, and monitoring and assessing pupil performance. The third section focuses on the effective principal, while the fourth covers aspects of teacher effectiveness: expectations, academic learning time, classroom management, teacher preparation, discipline, direct instruction, success rate, and mastery learning. The human side of the effective school is touched on briefly, followed by a conclusion summarizing the implications of the research. References are included. (TE)

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# Academic Development in the Effective School: A Review of the Literature

Saskatchewan School Trustees Association

EA 017 961

# Academic Development in the Effective School: A Review of the Literature

Loraine Thompson
Information Services Limited

S.S.T.A. Research Centre Report No. 106

A report with recommendations prepared under the auspices of the Saskatchewan School Trustees Association Research Centre. An earlier version of this review was jointly funded by Saskatchewan Education and the Saskatchewan School Trustees Association.

March, 1984

Note: The opinions expressed in this report are those of the author and may or may not be in agreement with SSTA officers or trustees, but are offered as being worthy of consideration by those responsible for making decisions.

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## OVERVIEW

Today's society makes many demands on the school. Schools are expected to meet a wide range of social and academic goals. The role of the teacher becomes that of a decision maker who identifies the goals most appropriate for a particular teaching situation and reconciles the trade-offs involved in achieving those goals.

One of the major goals of most schools is development of basic academic skills. Most often these skills are measured by using standardized measures of achievement. In recent years, a body of research has emerged which suggests that it is possible for teachers to raise students' scores on standardized tests. This effective schools research identifies a number of characteristics common to effective schools. The trade-offs necessary to achieve higher standardized test scores are implicit in this research.

In the effective school the principals and teachers have high expectations for each other and for student achievement. There is a strong academic emphasis, school goals that are accepted by all, and a system for monitoring and assessing pupil performance. The environment is safe and free of vandalism or crime. The principal provides assertive leadership and is actively involved in the instructional program. Within individual classrooms most of the students' time is focused on academic tasks relating to the school goals. The teacher manages the classroom so that disruptions and discipline problems are minimal and so that little time is spent on non-instructional activities. The learning process is directed and controlled by the teacher. Selection of learning materials carefully matched to student ability and teaching to mastery are also common in the effective classroom.

While the effective school has a fairly formal and business-like atmosphere, it is also a happy place. The research shows a consistent relationship between a warm, supportive climate and school achievement.

Most of the effective schools research has been done in poor, urban schools in the U.S., which have a high percentage of minority students. In spite of the lack of Canadian research there is some evidence to suggest that the findings of the American studies are relevant in Canada, as well. Research on the implementation of these findings should be given a high priority.

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# 1. INTRODUCTION

## 1.1 Educational Goals

Today's society places many demands on the educational system and on individual teachers. The school has not one goal but many. The goals of the school emphasize children's social development as well as their intellectual growth. This is illustrated by a number of Saskatchewan studies. The final report of the Minister's Advisory Committee on Curriculum and Instruction lists the goals of education (Saskatchewan Department of Education, 1984). Included are goals relating to self-concept development, life-long learning, positive lifestyle and membership in society, in addition to goals relating to the acquisition of basic skills. Goal studies done in the Moose Jaw and Turtleford areas in 1976 showed a similar range of goals. In both of these studies, "develop skills in reading, writing and arithmetic" was ranked first, but other goals such as "develop a sense of personal worth and competence", "develop respect for others" and "develop a desire for learning" were ranked among the top seven (Birnie, 1976a; Birnie, 1976b).

In recent years the term effective school has come to mean a school in which students achieve high marks on standardized measures of academic achievement. Yet the studies previously mentioned indicate that "educators and parents also prize out-comes of schooling that reach beyond current definitions of effectiveness: sharing, learning to make decisions, developing self-esteem, and acquiring higher-level thinking skills (analysis, evaluation, etc.) and aesthetic sense" (Cuban, 1983).

When faced with this plethora of goals the teacher's role becomes that of decision maker. Which of all the possible goals should receive priority? In order to set goals, teachers must examine the expectations of their community and analyze the needs of individual children. Goal setting always involves some element of trade-off. For example, if all available classroom time is directed toward basic skills instruction with the goal of improving scores on standardized tests, there will be little time left for art, music and dance which might develop children's aesthetic sense.

The trade-off involved in setting goals sometimes affects methods of instruction as well as classroom time allocations. There is some evidence to suggest that greater self-concept, creativity and a positive attitude toward school are best developed through what is often called "open education"; that is, programs in which diagnostic evaluation, manipulative materials and individualized instruction are used and children are allowed to be actively involved in guiding their own learning (Giaconia & Hedges, 1982).

This method of instruction is quite the opposite to that suggested as being most appropriate if the desired goal is an effective school; that is, a school in which the primary goal is the raising of scores on standardized achievement tests.

Teachers are required to make decisions of this type every day. They decide upon the goals that will receive priority, the methods of instruction to use in reaching those goals and the trade-offs necessitated when one goal is selected over another.

Most teachers view the acquisition of basic skills as one of the most important goals of the school. Often basic skills achievement is measured through the use of standardized tests. This literature review examines the teaching techniques and school environment which have been linked with high scores on standardized tests. It is intended to describe the strategies which might be used to achieve one particular educational goal and to make teachers aware that trade-offs are required when they choose to emphasize this particular goal.

## 1.2 Background to the Effective Schools Research

Much of the research on schooling done during the 1960s suggests that the home, rather than the school, is the main determinant of educational progress. This research suggests that attending one school rather than another makes little difference to student development when compared to the effects of coming from different home environments. Typical, and perhaps best known, of the studies from this period are those by Coleman (1966) and

Jencks (1972). Coleman concludes that educational attainment is largely independent of the schooling that a child receives while Jencks says that parental social status has more impact on a child's achievement than does schooling.

In the 1970s, however, a body of literature began to emerge which suggests that some schools are considerably more effective than others as educational environments (Burgess, 1981; Cohen, 1981; Reynolds, 1982). While this more recent research does not deny the profound effect of the home in shaping students' character, personality and intelligence, it suggests that schools can and do play an important role in educational achievement.

How can these two very different sets of research conclusions be explained? One answer lies in the fact that the studies of the 1970s examine different aspects of the school environment than does the research completed during the 1960s. The studies of the '60s use very few measures of the school environment in comparison to those assessing the quality of the home. The school variables which are used are quantitative in nature rather than qualitative. That is, they measure resources, equipment and facilities rather than examining relationships and interactions between students and teachers. More recent research focuses on the qualitative aspects of the educational process; examining and analyzing interactions between principals, teachers and students (Curran, 1982; Reynolds, 1982).

In addition, recent research looks at different qualities in the school staff, than does the research of the '60s. For example, researchers have traditionally sought to relate the success or failure of principals to professional characteristics such as years of training and experience or to personal factors such as age, sex or race. More recent studies have looked at other factors and have found attitudes to be more important to school success than other leadership variables (Clark, Lotto & McCarthy, 1980).

Research methodologies differ as well. Earlier studies measure various aspects of the school surroundings while the research of the '70s uses interviews and direct observation of schools in action as the chief information gathering technique.

Some words of caution are in order when evaluating the effective schools literature. Most of the early studies on effective schools focused on the elementary grades. While a growing body of information about effective high schools points to similar conclusions as the elementary school studies, care should be taken when generalizing this body of research to all grades and all schools. As well, most of the research has been done in the U.S., much of it in poor, urban schools with a high percentage of minority students. To date little research has been done in this area in Canada.

What follows is a review of this research. The focus of the research is on understanding why children excel in basic skill achievement in some schools but not in others.

## 2. THE EFFECTIVE SCHOOL

There is no single factor which accounts for a school being unusually effective. Instead, effective schools appear to have a number of critical factors which, when combined, make the difference. The most important of these factors are discussed in the sections which follow. All of these factors do not appear in every study of effective schools but are characteristic of the group as a whole (Austin, 1979).

### 2.1 Expectations

The most consistent and perhaps the most critical factor associated with effective schools is the level of expectations that administrators and teachers hold for each other and for students. Virtually every study completed to date mentions the importance of teacher and principal expectations. In a successful school teachers believe that all students, regardless of family background, can reach appropriate levels of achievement (Edmonds, 1979a). They believe that all of their pupils can master basic objectives and feel that the principal shares this belief. They tend to report higher and increasing levels of student ability, while in less successful schools teachers project the belief that students' ability levels are low and that students, therefore, cannot master even basic skills (Brookover & Lezotte, 1977).

Not only do the personnel of successful schools have high expectations for students, they believe that they are capable of teaching students successfully and assume responsibility for this process (Brophy, 1982b). This is in contrast to less effective schools where the staff members feel that there is not much teachers can do to influence the achievement of students. In less successful schools teachers tend to displace the responsibility for skill learning onto the parents or the children themselves (Brookover & Lezotte, 1977).

The relationship between student achievement and teacher and principal expectations is well documented (Good, 1982). This relationship provides an example of the self-fulfilling prophecy. Students who achieve are expected to achieve, first by their principals and second by their teachers (Shoemaker & Fraser, 1981). Students tend to live up to the expectations that their teachers have for them.

2.2 Leadership

Quality of school leadership is a second factor which appears consistently in all studies describing effective schools. The school that performs in unusually successful ways has a principal who is an exceptional person (Austin, 1979). The picture which emerges from the large body of literature on the topic is that of a principal who has a personal vision of where the school is going, an image of the school as it should be, and the expertise and force of character to make the vision a reality (Manasse, 1982).

2.3 School Environment

Effective schools tend to have a climate that is conducive to learning; that is, a safe and orderly atmosphere free of vandalism, crime and discipline problems (Edmonds, 1979b; Weber, 1971). In an effective school there are rules, regulations, and guidelines which teachers and students are expected to know and observe. The rules are clear and accepted by most (Shoemaker & Fraser, 1981).

2.4 Academic Emphasis

Another factor associated with successful schools is an emphasis on academics. In these schools learning is valued by the teacher and this value is

communicated to the students. Both teachers and students recognize that learning is the main reason for being in school (Powell, 1979). Specifically, the emphasis on academics usually manifests itself as a focus on the basic academic skills. The principals and staff members of successful schools place a great deal of importance on the accomplishment of basic reading and mathematic objectives (Edmond, 1979b; Brookover & Lezotte, 1977).

This emphasis on academics is reflected in the way that teachers allocate time in the classroom. Across a number of studies the successful teachers were those who maintained a strong academic focus and spent less time on non-academic activities. For example, in a study of one hundred grade one and three classrooms it was found that time spent on activities involving reading or math yielded positive, consistent and usually significant correlations with achievement gains. In contrast, activities involving stories, arts and crafts, active play or child selection of seating or work group always yielded negative results (Rosenshine, 1979).

After viewing a number of studies Rosenshine (1979) concludes that there is no non-academic activity that yields positive correlations with achievement in reading and math. This is surprising since it has frequently been argued that some non-academic activities contribute to academic gain by motivating students or by providing additional stimulation. Such indirect enhancement was not evident in any of the studies examined by Rosenshine.

Homework is another manifestation of academic emphasis. Bennet et al, (1976) reports that teachers in high achieving classrooms emphasized regular homework, gave weekly tests, marked and graded students' work and expected pupils to be quiet. Rutter et al, (1979) found that schools which assigned homework frequently and provided a check on whether teachers actually did assign it tended to have better outcomes in terms of both pupil behavior and achievement. Rutter found that the time spent on homework was not very great, ranging from 15 to 35 minutes per night. He hypothesized that in addition to its practical value in reinforcing school learning, homework may be of symbolic importance in emphasizing the school's concern for academic progress.

Display of students' work is another indicator of academic emphasis. It has been found that schools which display a lot of children's work on the walls tend to have a better academic outcome. Display of pupils' work is a highly visible reminder of the academic emphasis of the school. It is also a type of public praise for student achievement (Rutter et al, 1979).

2.5 School Goals

Successful schools are characterized by clearly stated curricular goals and objectives (Clark, Lotto & McCarthy, 1980; Edmonds, 1979a; Why do some urban schools . . . 1980). These schools seem to have a sense of mission that is accepted and shared by teachers, pupils and administrators (Clark, Lotto & McCarthy, 1980). Most often the curriculum goals focus on achievement in the basic skill areas.

Staff and students accept and emphasize the importance of these goals. This is in direct contrast to less successful schools where less emphasis is given to such goals and they are not identified as being fundamental (Brookover & Lizotte, 1977).

Consistency and shared norms throughout the school are also important. Where teachers are in agreement about types of discipline for particular offenses and engage in joint planning of teaching and curriculum, better behavior and higher achievement is observed than in schools where teachers each go their own way (Rutter et al, 1979).

The principal is obviously instrumental in setting school goals. The evidence suggests that effective principals set clear goals for their schools' instructional program and announce these goals to students, faculty and community (Pinero, 1982).

2.6 Monitoring and Assessing Pupil Performance

Most successful schools have a system for monitoring and assessing pupil performance which is linked to instructional objectives (Edmonds, 1979b). In these schools testing and evaluation are given serious and deliberate attention (Shoemaker & Fraser, 1981).

Students are given frequent feedback on their progress and achievement. It has been shown that feedback which is academic in nature correlates positively with achievement (Berliner, 1979).

Successful schools have an academic emphasis, clearcut goals and objectives reflecting this emphasis, and a system for monitoring and evaluating student progress which is closely tied to the instructional objectives. In these schools objectives are clearcut and do not vary significantly from one teacher to another. When students move from class to class or grade to grade they do not have to adjust to conflicting or contradictory goals. Within the classroom the teacher is not overwhelmed by a multitude of "priorities". The teacher's clear perception of what is important is communicated to the students. Because these schools provide regular assessment which is tied to objectives, students know what they will be tested on and where they need to concentrate their energies in order to meet the school's standards.

## 3. THE EFFECTIVE PRINCIPAL

The literature makes frequent reference to the leadership role of the principal in an effective school. Descriptions such as "strong instructional leader" and "assertive leader" are common. These terms, however, give little information about what the principal in an effective school actually does. The sections which follow provide a more detailed description of the charactertistics and behavior of an effective principal.

### 3.1 Assertive Leadership

In an effective school the principal "runs the school", the school does not run itself (Shoemaker & Fraser, 1981). By virtue of position the principal has certain rights of initiative that make it possible to stimulate, sustain or alter expectations for performance in ways that others cannot. Effective principals use these rights to fullest advantage to seize the initiative and see that their convictions and philosophies in regard to achievement are carried out (Little, 1982; Shoemaker & Fraser, 1981). In general, effective schools are more tightly managed than are less successful schools and are more collectively committed to common goals (Cohen, 1981).

3.2 Instructional Leadership

The average school principal spends more time on managing the institution than on instruction related activities. One study found that as much as 80 per cent of the average principal's work day was spent on institutional management (Manasse, 1982). The picture presented of the principal in the effective school is noticeably different. Here, the principal is actively involved in the instructional process (Sackney, 1982). Because principals are largely free to shape their jobs to their own image these principals have chosen to give priority to instructional concerns by delegating as many non-instructional tasks as possible (Manasse, 1982; Pinero, 1982). Successful schools have principals who: are concerned about instruction; communicate their views about instruction; take responsibility for decisions relating to instruction; emphasize academic standards; and regularly review and discuss teaching in their schools with teachers (Wellisch, et al, 1978).

Principals who are instructional leaders exhibit other types of behavior as well. They contribute to the establishment of norms by announcing clear expectations that all staff will be knowledgeable about effective instruction and will be participants in efforts to improve the quality of instruction. They contribute to those norms by themselves participating in instructional improvement. For example, they read and report on current research and they join teachers in studying, talking about and planning for instructional improvements. They reward teachers who practice quality instruction. These rewards include ensuring that time, materials and equipment are available, juggling schedules to allow teachers to work together, "covering" classes so that teachers can observe each other or participate in training, and offering frequent informal "pats on the back" for a job well done. They also provide protection from internal and external strains and pressures to those teachers who participate in improvement efforts. (Little, 1982).

3.3 Expectations

It was noted earlier that the high expectations held by principals and teachers for student achievement is one of the most important characteristics of successful schools. The principal's role in establishing, communicating

and maintaining high expectations is key. Similarly, the effective principal assumes the responsibility for setting rules to ensure a safe environment and ensuring that the rules are accepted and observed.

## 4. THE EFFECTIVE TEACHER

Students spend much of their day in classrooms interacting with teachers and other students. In the final analysis it is that which happens in the classroom that determines the success of a school. Like schools and principals, successful teachers have identifiable characteristics.

### 4.1 Expectations

Again, expectations play a major role. Effective teachers believe that students are capable of learning. They also have confidence in their own ability to teach all students successfully. They experiment with curricula, instructional methods and evaluation techniques until they find a combination that works. If something is not learned the first time around they teach it again. They view student failure as a challenge and do not write off any youngsters as being incapable of learning because of family or environmental circumstances (Brophy, 1982b).

### 4.2 Academic Learning Time

Many activities take place in a classroom which are not directly associated with learning. Suppose that a mathematics period is 45 minutes long. The first 10 minutes of the period may be spent getting out books, passing out paper, sharpening pencils, and generally settling down to work. The last 10 minutes of the period may be devoted to putting away workbooks, Cuisenaire rods and other materials, and lining up for dismissal. The math period is now functionally 25 minutes long (Berliner, 1979). If the teacher interrupts the lesson several times to reprimand disorderly students, the time devoted to instruction is even further reduced. Non-instructional time can vary from 20 per cent to 60 per cent of the students' school day. In traditional classrooms about 35 per cent of the time is spent on non-instructional tasks (Partridge, 1981).

The effective teacher is able to organize the classroom so that the time spent on non-learning activities is kept to a minimum. The majority of classroom time is spent in active learning. This additional academic learning time (Gage, 1978) or time-on-task (Bloom, 1980) may amount to several hundred hours per year over what is the norm for less successful teachers (Brophy, 1982b).

The correlation between time-on-task and student achievement is very high (Partridge, 1981). Students of effective teachers learn more than other students, in part, because they spend more time in the process of learning.

In successful classrooms teachers devote much of the time available to achieving the goals of the school; proficiency in basic skills. A great deal of classroom time is spent in basic skills instruction. The Beginning Teacher Evaluation Study found significant differences in time allocations between effective and non-effective teachers (Fisher et al, 1978; Denhan & Leiberman, 1980). One grade five teacher spent only 68 minutes per day on instruction in reading and language arts, while another teacher spent 137 minutes a day. At the grade two level one teacher allocated 47 minutes a day for reading and language arts, another teacher allocated 118 minutes a day, or more than double the amount of time per day, to instruction in reading and language arts. The situation was the same for mathematics. One grade two teacher allocated 16 minutes a day to math instruction while another found 51 minutes per day to devote to math (Berliner, 1982).

4.3 Classroom Management

Classroom management is another important component of successful teaching. Stallings and Hentzell (1978), after reviewing research on effective classrooms, report that no one curriculum or program is best for all schools. They also report that how teachers manage classes is fundamentally related to student progress in the basic skills. Much evidence suggests that the managerial skills of teachers are strong determinants of academic learning. If achievement in basic skills is a goal, it is highly desirable that teachers run their classrooms with a minimum of disruption and a maximum of task involvement (Good, 1979). As well as maximizing the time available for academic learning, effective classroom management contributes to learning by

reducing behavior and discipline problems (Brophy, 1982b; Evertson et al, 1980).

Successful classroom managers do a considerable amount of preparation and organization at the beginning of the year (Brophy, 1982a; Emmer, Evertson & Anderson, 1980). They arrange student seating, materials storage and other aspects of physical space in accordance with their instructional objectives and teaching methods. During the early weeks of school they spend a significant amount of time introducing students to rules and procedures. Information is provided on the daily schedule, procedures for pencil sharpening, procedures for recess and lunch, where to put personal items, how to get a drink and use the bathroom, and how to prepare for work with maximum efficiency. Effective teachers show students what to do, provide practice, follow-up and periodic reminders. They make sure that their expectations regarding procedures and routines are clear and consistent and provide additional practice when procedures are not carried out properly. In short, key procedures are taught to students in more or less formal lessons, just as academic content is taught (Brophy, 1982a).

The objective of this work at the beginning of the year is to establish a system of rules and procedures that students are able to attend to without constant instruction from the teacher. Once the procedures and rules are learned they are used automatically and do not occupy teacher time throughout the rest of the year. Thus, more time is available for academic learning (Gage, 1978).

4.4 Teacher Preparation

Effective teachers are well prepared for the activities planned each day and are able to move through the activities at a brisk pace. There are no interruptions due to failure to prepare materials, no confusion about what to do next, no referring to the teacher's manual and no backtracking to present information which should have been presented earlier.

Effective teachers do not disrupt a lesson to reprimand an unruly student, instead they deal with the student in ways that are not disruptive to the whole class. They might move closer to the inattentive student, use eye

contact or direct a question or comment to the student.

When students have this type of continuous academic "signal" to attend to they are more attentive and thus learn more. It is more likely that problems will occur when students have no stimulus or task on which to focus (Brophy, 1982a). Additionally, when the teacher is well prepared and is able to proceed through a lesson without interruptions and backtracking, time is being used more efficiently and students are given an opportunity for more active learning (Brophy, 1982a).

4.5 Discipline

Effective teachers tend to take a preventative approach to discipline (Evertson et al, 1980). Rather than punishing or reprimanding students they manage their classrooms so that behavior problems do not develop (Brophy, 1982a). This is done by keeping up the pace of instruction and thus maintaining student interest, by making expectations clear, by establishing rules and procedures and by monitoring their classrooms. Successful teachers continually monitor their classrooms, either by stationing themselves where they can see all of the students all of the time (Brophy, 1982a) or by moving around the room supervising pupils' seatwork and checking their behavior simultaneously (Gage, 1978).

Effective teachers avoid disciplinary techniques which are humiliating to the student. Higher achieving classrooms are observed to be convivial, cooperative, democratic and warm, whereas in lower achieving classrooms there is more belittling and shaming of students and use of sarcasm (Tikunoff, Berliner & Rist, 1975). Teacher criticism of student behavior, shouting, scolding, ridicule and sarcasm, has been found to have a consistent negative relationship to gain in achievement (Solomon & Kendall, 1976).

Corporal punishment is also negatively related to school effectiveness. In the Rutter study (1979) there was a tendency, which stopped just short of statistical significance, for high levels of officially sanctioned corporal punishment to be associated with worse behavior. Where unofficial physical punishments, such as slaps or cuffings were used, pupil behavior was very definitely worse.

4.6 Direct Instruction

That direct instruction is associated with increased learning gains is a common, almost universal, conclusion of recent research (Good, 1979). Several descriptions of direct instruction exist. According to Rosenshine (1979) direct instruction has the following characteristics: an academic focus, a teacher-centered focus, little student choice of activity, use of large groups rather than small groups for instruction and the use of factual questions and controlled practice in instruction. Good (1979) describes direct instruction as active teaching in which the teacher sets and articulates learning goals, actively assesses student progress and frequently makes class presentations illustrating how to do assigned work. Brophy (1982b) says that teachers engaged in direct instruction spend much of their time actively demonstrating skills, explaining concepts, discussing assignments and reviewing materials with large and small groups of students.

While the description of different theorists may vary slightly, direct instruction may be summarized as teaching in which the teacher sets educational goals, assigns work, chooses learning activities and actively teaches and supervises pupils.

Good (1979) offers an explanation for the effectiveness of direct instruction. He suggests that one of the reasons for its success is its emphasis on the individual teacher. It provides a clear focus on achievement in the basic skills thus simplifying the vast array of goals faced by most teachers and offers a practical, plausible method of instruction. Direct instruction increases teachers' motivation and sense of personal efficiency which in turn enhances teacher expectations for student learning. When teacher expectations rise, students learn more.

Good (1979) suggests that direct instruction has an effect on students as well. Ambiguity regarding expectations is reduced and concepts and skills are practiced in a meaningful context. Brophy (1982b) explains the success of direct instruction by suggesting that to work well independently, students must have both a good grasp of basic skills and a high level of motivation - something which no young children and few older students possess.

4.7 Success Rate

Much of the literature suggests that a high student success rate is an important part of the effective classroom. Students learn more when they spend more time on tasks at which they have a higher success rate (Powell, 1979; Berliner, 1982; Brophy, 1982b). This is especially true for students who have fewer skills to begin with (Powell, 1979). Teachers who aim for a 90-100 per cent success rate on student assignments produce more learning than do teachers who accept lower rates of success. High success rates are particularly important for seatwork assignments where students are expected to work independently without help from the teacher (Brophy, 1982b). In oral sessions, successful teachers always aim at getting a student to give some kind of response to a question. Rephrasing, giving clues or asking new questions are techniques used for getting an answer from a child who would otherwise answer incorrectly or say "I don't know" (Gage, 1978).

The rate of success is not inherent in the instructional task, but is a function of the match between the task and the student's skill level (Powell, 1979). How this match is achieved is not entirely clear in the literature but it can be assumed that a great deal of time and effort must be given to selection of learning materials.

Some writers indicate that individualization is associated with achievement (Clark, Lotto & McCarthy, 1980). Other writers say the exact opposite; that individualization is not associated with achievement and that the most effective learning takes place when the class is taught as a unit (Good, 1979). Still other researchers fall somewhere in between, concluding that work with one student is negatively related to achievement but that time spent working with small groups (three to seven students) or with large groups is positively related to achievement. Rosenshine (1979) reviews several major studies which reach this conclusion. He suggests that while educators may prefer that teachers work with one or two children at a time, the reality is that when teachers are working with only one or two children they are unable to provide supervision for the rest of the children who, as a result, have less academically engaged time.

Common sense suggests that this latter finding is probably the most accurate. In any particular grade there will be variations in student skill levels. Maintaining a high standard of academic success requires recognition and accommodation of these differing levels of skill. Grouping rather than one-on-one individualization may be the most effective means of ensuring a high success rate.

### 4.8 Mastery Learning

Closely linked to success rate is the concept of mastery learning. Students of effective teachers consistently experience high success rates because their teachers make sure that new knowledge and skills are mastered to the point of over learning. Much of the learning in the basic skills areas is cumulative. Effective teachers spend much of their time asking factual questions and supervising practice of basic skills and thus laying the ground for efficient performance on higher level objectives (Brophy, 1982b).

Bloom (1980) makes this same point when he indicates that effective teachers use formative rather than summative tests. Formative tests provide feedback to inform the student about what has been learned well and what must still be learned.

## 5. THE HUMAN SIDE OF THE EFFECTIVE SCHOOL

The effective school is a task-oriented, orderly, business-like place with a fairly high level of structure. This does not mean that the relatively formal organization of the effective school leads to a humourless, cold, regimented or military workplace (Rosenshine, 1979). In fact the opposite is true. The effective school is a happy place. Students and teachers like each other and get pleasure from their shared participation in the learning process.

Across several studies, teachers in effective schools have been rated as warmer and more responsive (Austin, 1979). A classroom environment characterized as warm, democratic and convivial showed up on the Beginning Teacher Evaluation Study as a positive predictor of achievement (Rosenshine, 1979;

Berliner, 1979). The research indicates that there is no need for teachers to be harsh or demeaning in order for their classes to be effective. Decent, humane and genuine interactions occur in many classrooms that are highly structured and teacher directed (Rosenshine, 1979).

Highly effective teachers stress cognitive objectives, but they are not slave drivers, nor are their classrooms sweatshops. They maintain high standards and insist that students do their best, but they are not punitive or hypercritical. Instead, students perceive effective teachers as enthusiastic and thorough instructors whose classrooms are friendly and supportive (Brophy, 1982b). The same holds true for effective principals. Being an assertive, achievement-oriented leader does not necessarily preclude a concern for human relations. The principals in most achieving schools want teachers and students to be happy and to feel that school is a pleasant place to be. The difference between these principals and those of lower achieving schools is that concern for human relations is not allowed to displace a concern for academic success (Shoemaker & Fraser, 1981).

The attitudes and personalities of teachers and principals certainly play a large part in making the effective school a happy place. This is not the whole story, however. The old adage, "nothing succeeds like success" is very true in the case of the effective school. Children's success in their well organized tasks can make them happy with school and with themselves (Gage, 1978). It also contributes to their academic self-esteem which in turn results in further learning (Rosenshine, 1979).

## 6. CONCLUSION

The effective school, as defined in the literature, is one characterized by high achievement on standardized tests of basic skills. In selecting high achievement on standardized tests as an important goal, teachers are by necessity giving lower priority to other educational and social goals. Certain characteristics have been identified as being typical of the effective school. In a model effective school the principal and teachers would have high expectations for each other and for student achievement. There would be a strong academic emphasis, school goals that are accepted by all

and a system for monitoring and assessing pupil performance. The environment would be safe, free of vandalism and crime. The principal of this school would provide assertive leadership and be actively involved in the instructional program.

In individual classrooms most of the students' time would be focused on academic tasks relating to the school goals. The teacher would manage the classroom so that disruption and discipline problems are minimal and so that little time is devoted to non-instructional activities. The learning process would be largely directed and controlled by the teacher. A high success rate and teaching to mastery would also be characteristic of the classrooms in this ideal school.

While the ideal school would have a fairly formal and business-like atmosphere it would also be a happy place. It would provide a warm, supportive environment for students.

Little research on the characteristics of the effective school has been done in Canada and virtually none has been carried out in Saskatchewan. However, there is some evidence to suggest that the American effective schools research applies in a Canadian situation as well. For the past two years the Calgary Board of Education has been sponsoring workshops based on Ronald Edmond's studies and on the British Rutter study. The Board reports remarkable results with this program. Academic achievement, attendance and behavior have all shown improvement (Priftis, 1983).

At the outset the issue of balance among school goals was said to be important. Basic skill achievement is important but so are other goals; development of higher order cognitive skills like information analysis and decision-making, creation of a sense of artistic appreciation and growth of children's understanding of themselves and others are just a few examples.

In one sense these goals can be seen to compete for teachers' and children's time and attention in school. In another sense, these goals can be achieved together in an integrated or serial manner. The literature suggests that a healthy self-concept can develop through basic skill achievement and that

children cannot perform well in unstructured tasks if they don't possess the basic skills needed to undertake the task.

The literature, in a nutshell, is saying that schools are people. The decisions that teachers make about grouping, content, instructional style, classroom management and goal emphasis are particularly important to student success. The support that principals provide by clearly articulating school goals and helping teachers to make well founded instructional decision is no less important. Administrators, teachers, trustees and parents and children possess both the right and, more than ever before, the knowledge to make schools places where educational goals are achieved.

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